UNITED STATES OF AMERICA

FEDERAL COMMUNICATIONS COMMISSION

TECHNOLOGICAL ADVISORY COUNCIL MEETING

THURSDAY, AUGUST 17, 2023

The advisory committee met via video teleconference, at 10:00AM Eastern time, Dean Brenner, Chair, presiding.

COMMITTEE MEMBERS PRESENT:

First Name	Last Name	Company Representing
Shahid	Ahmed	NTT LTD
Mark	Bayliss	Virginia ISP Association and Visual Link Internet
Ranveer	Chandra	Microsoft
Lynn	Claudy	NAB
Andrew	Clegg	Wireless Innovation Forum
Marty	Cooper	Dyna LLC
Brian	Daly	AT&T
Monisha	Ghosh	The Wireless Institute, University of Norte Dame
Abhimanyu	Gosain	Northeastern University
Lisa	Guess	Ericsson North America
Steve	Lanning	Viasat, Inc
Gregory	Lapin	American Radio Relay League
Kaniz	Mahdi	Deustche Telecom
Brian	Markwalter	Consumer Technology Association
Jose	Mejia	RapidSOS
Lynn	Merrill	NTCA
Amit	Mukhopadhyah	Nokia
Jack	Nasielski	Qualcomm, Inc.
Madeleine	Noland	ATSC
Jesse	Russell	IncNetwork
Tom	Sawanabori	CTIA

Marvin	Sirbu	SGE
Ted	Solomon	NRTC
Michelle	Thompson	Open Research Institute
Bejoy	Pankajakshan	Mavenir
LiChing	Sung	NTIA Liaison

COMMISSION STAFF PRESENT:

First Name	Last Name	Title
Ronald	Repasi	Chief, Office of Engineering and Technology
Michael	Ha	Designated Federal Officer
Martin	Doczkat	Deputy Designated Federal Officer

SUMMARY:

The advisory committee meeting began at 10:00AM Eastern time, with welcome remarks from the Technological Advisory Council (TAC) Chair, Dean Brenner, who emphasized the importance of the TAC's focus on 6G and emerging technologies in terms of U.S. leadership role in technological advancement, and set the landscape for the recommendations provided by the TAC's four working groups (WGs): 6G, Emerging Technologies, Artificial Intelligence/Machine Learning (AI/ML), and Advanced Spectrum Sharing. The TAC Chair thanked the TAC, especially the WG chairs, for their hard work leading up to the deliverables concluding this TAC's charter cycle. The TAC Chair announced that there will be two white papers up for discussion, and that the DFO role transition from Michael Ha to Martin Doczkat for the next TAC charter cycle.

The TAC Chair's remarks were followed by welcome remarks from OET Chief Ronald Repasi, expressing his appreciation of the work involved leading up to the final recommendations for this cycle, and the support within and across working groups to get there.

The OET Chief's remarks were followed by welcoming remarks from the DFO Michael Ha and Deputy DFO Martin Doczkat, noting achievements of the working groups in providing their actionable recommendations concluding this TAC's charter cycle, announcing that the Commission plans to recharter the TAC for another cycle, and recognizing the new NTIA liaison, LiChing Sung.

Emerging Technologies: following their reporting from 2022, the WG chose targeted areas identified for further exploration, specifically: positioning and location, AR/VR (XR) impacts on spectrum, and reconfigurable intelligent surfaces (RIS). The WG recommended the FCC should continue to monitor developments in sensing and communications, evaluate the spectrum needs and sharing mechanisms considering the increasing demand and capacity of immersive XR applications, and encourage and support research related to RIS and metasurfaces related to efficient spectrum use and standards development.

Advanced Spectrum Sharing: the WG in 2023 has completed an analysis of bands between 7.125 and 24 GHz for potential sharing opportunities, along with a summary of some of the existing spectrum sharing frameworks. A significant challenge is the lack of publicly available information on spectrum use. The WG identified a preliminary list of potential spectrum suitable for sharing, including 7.125 to 8.5 GHz, 10.7 to 13.25 GHz, 14.0 to 14.2 GHz, 17.8 to 18.6 GHz, and 18.8 to 20.2 GHz. The WG suggested follow-up efforts could include a evaluating a nationwide holistic view of spectrum needs, exploring emerging spectrum sharing techniques, and developing real-time databases to assess spectrum utilization supplemented by sensors and other data.

Artificial Intelligence and Machine Learning (AI/ML): the WG recommends that FCC should: take an active and lead role, in coordinating the national agenda to provide data and data sets important to Telecommunications; make the necessary investments and create an internal AI-focused organization, staffed with experts spanning all facets of AI; conduct a review of its information products and its mandates to create a long-range plan that provides its stakeholders with the best information services for a data driven world; use AI/ML tools to investigate systemic issues, to evaluate simulation systems to predict areas of concern and allow "what if" scenarios to be explored; and explore the frameworks proposed by organizations that are dedicated to the safe use of AI/ML.

6G: the WG recommends that the FCC should: build a longer-term spectrum pipeline; explore licensing/sub-let schemes to allow for localized/short-term changes to address both under-capacity and under-served areas; consider further streamlining the site location regulatory process; explore issues such as cell density, site acquisition, backhaul, inter-cell interference, technological advancements, and increased power consumption; encourage greater geographic-area spectral efficiency (bps/Hz/km2); continue to take into account security recommendations from standards and advisory groups. Additionally, the WG recommends the FCC continue TAC initiatives on solving the digital divide, including: encourage private stakeholders working on 6G to consider making the provision of low-cost, full-time internet access for students; explore technology and interoperability and options to solve last mile, mid-haul and backhaul needs; encourage specification/standards and industry organizations to focus on technical solutions aimed at reducing or closing the digital divide; work together with NTIA to identify spectrum and on other policies aimed at reducing or closing the digital divide; encourage technical collaboration and public/private partnerships between the wireless industry and the educational community; explore availability of unused, desirable spectrum and how rural areas can acquire access via spectrum bands that may offer broader geographic coverage; identify advanced spectrum sharing techniques across various frequencies in the rural areas with the goal of significantly increasing spectrum efficiency by allowing for access to a wider range of bandwidth; and ensure that the FCC broadband maps include accurate and updated information on internet access at all schools, libraries, and other educational institutions.

The advisory committee meeting adjourned at 3:00PM Eastern time.

VIDEO LINK: https://www.fcc.gov/news-events/events/2023/08/technological-advisory-council-meeting-august-17-2023

AGENDA:

10am – 10:30am	Introduction and Opening Remarks • Welcome Message (TAC Chair) • Opening Remarks by OET Chief • DFO/Deputy DFO Remarks • Member Introduction/Roll Call
10:30am – 11:15am	Emerging Technologies WG Presentation
11:15am – 12:00pm	Advanced Spectrum Sharing WG Presentation
12:00pm – 1pm	Lunch Break
1pm – 1:45pm	AI/ML WG Presentation
1:45pm – 2:30pm	6G WG Presentation
2:30pm – 2:45pm	Closing Remarks
2:45pm	Adjourned

SIGNED, COMMITTEE CHAIR

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Dean Brenner

_10/30/23_

Date